

REMARKS

This application has been amended in a manner that is believed to place it in condition for allowance at the time of the next Official Action.

Status of the Claims

Claims 27 and 39 are amended. Support for the amendment to the claims may be found, for example, at page 2, lines 20-22, page 4, lines 25-31, and page 22, lines 1-12.

Claim 30 is canceled.

Claims 27-44, 48-50, 52 remain in this application.

Claims 31-34 and 38 have been withdrawn.

Claim Rejections-35 USC §112

Claims 30 and 39 rejected under 35 U.S.C. §112, second paragraph, for being indefinite. This rejection is respectfully traversed for the reasons below.

Claim 30 was rejected for reciting a ratio of D-mannose to D-glucose that is inconsistent with percentages recited in the independent claim. However, this rejection appears to be the result of a misunderstanding of "a ratio in the range of 5 to 20". That is, as recited the value of the ratio falls within the range of 5 to 20. The ratio itself is not 5 to 20.

This feature has been added claim 27, and to avoid further confusion has been written with punctuation rather than words, e.g., "5:1-20:1".

Claim 39 was rejected for reciting "ultra filtered". However, in light of the specification, e.g., page 22, lines 1-12, this expression refers to an ultrafiltration extract. Ultrafiltration is definite term, well-known in the art, e.g., as evidenced by its inclusion in the U.S. Patent Classification 210. Accordingly, claim 39 has been amended to recite an ultrafiltration extract.

Therefore, withdrawal of the rejection is respectfully requested.

Claim Rejections-35 USC §102

Claims 27-30, 35-37, 39, 41-44, 49, 52 were rejected under 35 U.S.C. §102(e) as being anticipated by QIU et al. U.S. 6,133,440 ("QIU"). This rejection is respectfully traversed for the reasons below.

The claimed invention is concerned with a very unique composition that has been shown to inhibit adhesion of particularly infectious microorganisms to the surface of human cells and, as such, has special curative properties. It was found that the curative properties are the result of specific isolated polysaccharides in the composition. These polysaccharides, which

are derivable from Aloe vera, are a chain of linked monosaccharides comprising mainly D-mannose and D-glucose.

Very surprisingly, fractions from plant or animal extracts that are obtained after elution from a positively charged DEAE column showed good curative properties. These fractions particularly comprise the polysaccharides in a negatively charged form. In comparative studies by the inventors (see e.g. table 1 of the application) these negatively charged polysaccharides (I-D_I) demonstrated high inhibiting characteristics compared to said polysaccharide fractions (I-D₀) that do not bind to the positively charged column. Although the precise nature of the negative charge at the time of filling of the application was unknown, it is clear that specifically the negatively charged polysaccharides have the desired curative properties. Accordingly, the present claims are directed to these specific polysaccharides which are negatively charged and further claims a method to specifically isolate these negatively charged polysaccharides.

QIU, however, is concerned with polysaccharides comprising D-mannose (90%), D-glucose (5% or less) and D-galactose (5% or less). Although QIU is silent to teaching polysaccharides that are negatively charged, the opinion presented in the Official Action was that "polysaccharides of QIU would inherently contain negatively charged polysaccharides, which can bind positively charged columns, because the

polysaccharides in the claimed and reference compositions all contain mannose and glucose".

However, the fact is mannose and glucose as such are not negatively charged, and, hence, they will not bind to a positive column. Indeed, table 1 of the present application demonstrates this fact. Fraction I-D₀, which mainly comprises mannose and glucose, does not bind to a positively charged column. Thus, the opinion presented in the Official Action is contrary to the facts presented in the Official Action.

Thus, QUI fails to disclose polysaccharides comprising 10- 30% D-glucose. QIU is also silent about polysaccharides that are negatively charged. QIU further fails to disclose or suggest a method step to specifically isolate negatively charged polysaccharides that bind to a positively charged column. Moreover, there is no indication, even or incentive, given by QUI for the skilled person to specifically use the negatively charged polysaccharides in a composition to obtain curative properties.

Therefore, QIU fails to anticipate, or even render obvious, the claimed invention and withdrawal of the rejection is respectfully requested.

Claims 27-30, 35-37, 41-44, 48-52, 52 were rejected under 35 U.S.C. §102(e) as being anticipated by JIA U.S. 6,395,311 ("JIA"). This rejection is respectfully traversed for the reasons below.

Again, the opinion presented in the Official Action was that "polysaccharides would inherently contain negatively charged polysaccharides, which can bind positively charged columns, because the polysaccharides in the claimed and reference compositions all contain mannose and glucose".

However, as discussed above with respect to QIU, Table 1 of the present application shows evidence to the contrary. Fraction I-D₀, which mainly comprises mannose and glucose, does not bind to a positively charged column. Thus, the polysaccharides are negatively charged and bind to a positively charged column. Thus, the polysaccharides of JIA are also not inherently negatively charged.

JIA also further fails to disclose that the polysaccharides comprise 10-30% D-glucose. JIA also fails to disclose or suggest a method to specifically isolate negatively charged polysaccharides.

Therefore, JIA fails to anticipate, or even render obvious, the claimed invention, and withdrawal of the rejection is respectfully requested.

Conclusion

In view of the amendment to the claims and the foregoing remarks, this application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our credit card which is being paid online simultaneously herewith for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Robert A. Madsen/
Robert A. Madsen, Reg. No. 58,543
209 Madison Street, Suite 500
Alexandria, VA 22314
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

RAM/lad